U.S. Department of Labor

Office of Administrative Law Judges
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Issue Date: 31 October 2003

In the Matter of:

CECIL SMALLWOOD, Claimant,	:	Case Number: 2000-BLA-117
vs.	:	
AFFINITY MINING/EASTERN ASSOC., Employer	:	
and	:	
DIRECTOR, OFFICE OF WORKERS' COMPENSATION PROGRAMS, Party in Interest	:	

James M. Phemister, Esquire
For the Claimant

Paul E. Frampton, Esquire
For the Employer

Before: EDWARD TERHUNE MILLER
Administrative Law Judge

DECISION AND ORDER - REJECTION OF CLAIM

Statement of the Case

This proceeding involves a duplicate or subsequent claim for benefits under the Black Lung Benefits Act, as amended, 30 U.S.C. §§ 901 et seq. ("the Act"), and the regulations promulgated

thereunder.[1] Since this claim was filed after March 31, 1980, Part 718 applies. §718.2. Because the Claimant Miner was last employed in the coal industry in West Virginia, the law of the United States Court of Appeals for the Fourth Circuit controls (D-1, 2, 4). *See Shupe v. Director, OWCP*, 12 B.L.R. 1-200, 1-202 (1989)(*en banc*).

Procedural History

Claimant, Cecil Smallwood, filed his initial claim for benefits under the Act on December 3, 1984 (D-34-1). Claimant was initially denied benefits and requested a hearing on May 9, 1985 (D-34-16, 34-17). By Decision and Order dated September 9, 1988, Administrative Law Judge John H. Bedford denied the claim based on his determination that the Claimant had not established that he was totally disabled due to pneumoconiosis (D-34-36).

The Claimant filed a subsequent claim on March 29, 1990 (D-35-1). The District Director denied the claim on August 23, 1990, finding no material change in conditions, no pneumoconiosis, causation, or disability attributable thereto. (D-35-18). Claimant requested a hearing on October 11, 1990 (D-35-19). On March 12, 1992, Administrative Law Judge Glenn Robert Lawrence denied benefits. He found a material change in conditions, and the existence of pneumoconiosis arising out of Claimant's coal mine employment, but held that the Claimant had not established a totally disabling respiratory impairment. (D-35-33).

The Claimant filed a second subsequent claim on March 30, 1999 (D-1). The District Director initially determined on September 10, 1999, that Claimant was disabled due to pneumoconiosis and entitled to benefits (D-31). Employer contraverted and requested a hearing which was held before this tribunal on September 18, 2000, in Beckley, West Virginia. (D-30, 32, 36) In addition to Claimant's testimony, Claimant's Exhibits one and two, Employer's Exhibits one through nine, and Director's Exhibits one through thirty-seven[2] were admitted into the evidentiary record (Tr. 6 - 8, 29 - 48). This tribunal's findings and conclusions, which follow, are based upon an appropriate analysis of the record, along with applicable statutes, regulations, and case law, in

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[1] All applicable regulations which are cited are included in Title 20, Code of Federal Regulations, unless otherwise indicated, and are cited by part or section only. The regulations were amended in 2000, effective January 19, 2001, and are found at 65 Fed. Reg. 80,945-809, 197 (2000), and codified at 20 CFR Parts 718, 722, 725, and 726. All citations refer to the amended regulations to the extent that they are effective in accordance with their terms. Claimant's Exhibits are denoted "C-"; Director's Exhibits are denoted "D-"; Employer's Exhibits are denoted "E-"; and citations to the hearing transcript are denoted "Tr."

[2] There is no Director's Exhibit 21, as the file was incorrectly numbered. The mistake was noted in the hearing. (Tr. 6 - 8)

relation to those issues which remain in substantial dispute.

Issues

1. Whether, under §725.309, Claimant has proved a material change in conditions since the previous denial of benefits on March 12, 1992, by establishing that he is totally disabled by a respiratory or pulmonary impairment.

2. If so, whether Claimant has established entitlement to benefits under Part 718, by showing he is totally disabled due to pneumoconiosis.

Findings of Fact

Background and Coal Mine Employment

The Claimant was born on September 26, 1926, and completed somewhere between the sixth and eighth grade in school (D-1, 34-1, 35-1). Judge Bedford and Judge Lawrence determined that Claimant completed twenty-four and a half years of coal mine employment, which is supported by the record, and this tribunal so finds (D-5, 6, 34-36, 35-33).[3] The Claimant last worked in the coal mine industry in 1985 as a beltman (D-4). The updated evidence of record does not support a finding of any dependents for purposes of augmentation of benefits under the Act.[4]

Medical Evidence Filed Since the Previous Denial

The following evidence has been filed since Judge Lawrence's Denial of Benefits on March 12, 1992.

[3] Employer stipulated to a 16 year coal mining career, which is the amount of time Claimant worked for Employer (Tr. 8-9).

[4] The record contains the death certificate of Claimant's wife, Wilma, who died on December 16, 1998 (D-12).

X-ray Evidence[5]

Exhibit No.	X-ray Date	Reading Date	Physician	Qualifications	Film Quality	Interpretation
D-18	5/28/99	7/27/99	Ranavaya	B	1	1/0; p/p
D-19	5/28/99	7/4/99	Navani	R, B	2	-/-
D-20	5/28/99	6/7/99	Patel	R, B	1	1/0; p/s
E-2	5/28/99	12/19/99	Wheeler	R, B	2	-/-
E-2	5/28/99	12/17/99	Scott	R, B	2	-/-
E-2	5/28/99	12/17/99	Gayler[6]	R, B	2	-/-
C-1	5/28/99	8/10/00	Alexander	R, B	1	1/1 p/p
E-1	9/15/99	11/7/99	Zaldivar[7]	B	2	-/-
E-4	9/15/99	1/24/00	Wheeler	R, B	2	-/-
E-4	9/15/99	1/25/00	Scott	R, B	2	-/-

[5] The following abbreviations are used in describing the qualifications of the physicians: B-reader, "B"; Board-certified radiologist, "R". An interpretation indicating "-/-" is used by this tribunal to signify that the x-ray was not classified as positive for pneumoconiosis in accordance with the requirements of §718.102 of the pre-amended regulations. In certain instances, where the doctor's credentials are not disclosed by the record, this tribunal has taken judicial notice of those qualifications by reference to the worldwide web, American Board of Medical Specialties, Who's Certified Results, at http://www.abms.org, and the List of NIOSH Approved B Readers, found, *inter alia*, at http://www.oalj.dol.gov/libbla.htm. *See Maddaleni v. Pittsburgh & Midway Coal Mining Co.*, 14 B.L.R. 1-135 (1990).

[6] Employer included an incomplete curriculum vitae for Dr. Gayler. Employer did include a B-reader certificate for Dr. Gayler, but it expired on 8/31/99. Judicial notice has been taken of Dr. Gayler's qualifications.

[7] Employer included a curriculum vitae, current to 1991, for Dr. Zaldivar. No other certification was given for Dr. Zalidvar.

Exhibit No.	X-ray Date	Reading Date	Physician	Qualifications	Film Quality	Interpretation
E-4	9/15/99	1/25/00	Gayler	R, B	2	-/-
E-7	9/15/99	3/14/00	Fino	B	1	-/-
C-1	9/15/99	8/10/00	Alexander	R, B	2	½ p/t
C-1	3/2/99	8/10/00	Alexander	R, B	2	½ p/t
E-5	3/2/99	2/8/00	Wheeler	R, B	2	-/-
E-5	3/2/99	2/8/00	Scott	R, B	3	-/-
E-5	3/2/99	2/8/00	Gayler	R, B	3	-/-
E-7	3/2/99	3/14/00	Fino	B	1	-/-

Pulmonary Function Studies[8]

Exh. No	Test Date	Age/ Ht	Co-op./ Undst.	Conform	FEV_1	FVC	MVV	Qualify
D-13	5/28/99[9]	72/66"	Good/Good	Yes	2.30	4.20	76	No
E-1	9/15/99[10]	72/65"	Not Noted	No	1.99 1.97	3.56 3.68	68 72	No No

Arterial Blood Gas Studies[11]

[8] The second set of listed values relates to post-bronchodilator test results.

[9] Dr. Ranavaya validated the ventilatory study on 7/27/99 (D-14, 17).

[10] Dr. Zaldivar noted moderate irreversible obstruction, hyperinflation with air trapping, and mild diffusion impairment, results similar to those of 1991 with changes due to aging.

[11] The second set of listed values relates to exercise test results.

Exh. No.	Test Date	Physician	Conform?	pCO_2	pO_2	Qualifying
D-13, 16	5/28/99[12]	Rasmussen[13]	Yes	32 34	64 67	Yes No
E-1	9/15/99	Zaldivar[14]	No[15]	33 31	83 86	No No

Physicians' Opinions

Dr. Rasmussen[16]

Dr. Rasmussen's report dated May 28, 1999, noted Claimant's twenty-four years of coal mining history doing considerable heavy manual labor as a hand loader, cutting machine operator, loading machine operator, roof bolter, continuous miner operator, ending as a plow head operator on the longwall, which involved much shoveling, rock breaking, and rock dusting carrying fifty pound rock dust bags two to three hundred feet, . Dr. Rasmussen also noted a thirty-four year, half pack of cigarettes a day, smoking history ending in 1979. In his physical examination of Claimant, Dr. Rasmussen, who is board-certified in internal medicine, observed normal breath sounds, no rales or rhonchi, and a minimal expiratory wheeze with forced respiration.[17] His examination included a

[12] Dr. Ranavaya validated the arterial blood gas study on 7/7/99 (D-14, 17).

[13] Dr. Rasmussen noted minimal obstructive ventilatory impairment; maximum breathing capacity minimally reduced (less than the calculated value of 82 L/min.) (Predicted 113); single breath carbon monoxide diffusing capacity moderately reduced; DL/VA minimally reduced; minimal resting hypoxia.

[14] Dr. Zaldivar noted that lungs are clear to auscultation without "wheezes, crackles, or rales" after applying the breathing test.

[15] There was no indication of altitude or barometric pressure as required under §718.105(c).

[16] A report by Dr. Rasmussen dated August 22, 2000, was submitted by Claimant as Claimant's Exhibit 3 for identification, but excluded as untimely under §725.456 at the hearing.

[17] Judicial notice of Dr. Rasmussen's professional qualifications have been taken by reference to the worldwide web, American Board of Medical Specialties, Who's Certified Results, at http://www.abms.org. *See Maddaleni v. Pittsburgh & Midway Coal Mining Co.*, 14 B.L.R. 1-135 (1990).

positive x-ray, 1/0, physical examination, EKG, ventilatory function studies revealing minimal obstructive insufficiency and minimally reduced maximum breathing capacity, a constant workload exercise study, and arterial blood gas studies, which were validated on July 27, 1999, by Dr. Ranavaya, who is board-certified in occupational medicine. Dr. Rasmussen noted moderately reduced single breath carbon monoxide diffusing capacity, minimally reduced DL/VA, and minimal resting hypoxia. The constant work load exercise study disclosed an oxygen uptake of approximately 70% of predicted, normal EKG and blood pressure responses, markedly increased volume of ventilation, limited breathing reserve, moderate impairment in oxygen transfer, and minimal hypoxia during exercise. Claimant exceeded his anaerobic threshold normally at about 57% of his predicted maximum oxygen intake. Dr. Rasmussen interpreted the studies overall as indicating a moderate loss of pulmonary functions and lack of pulmonary capacity to perform his last regular coal mine job with its attendant requirement for heavy manual labor. Dr. Rasmussen diagnosed coal workers' pneumoconiosis (CWP) based on twenty-four years of coal mine employment and x-ray changes of pneumoconiosis, and chronic obstructive pulmonary disease (COPD) based on Claimant's chronic productive cough and airway obstruction. Dr. Rasmussen identified cigarette smoking and coal mine dust exposure as the two risk factors, with coal mine dust exposure as the prominent factor in contributing to the Claimant's impairment, progressive since 1990. (D-15,17).

Dr. Zaldivar

Dr. Zaldivar, who is board-certified in internal medicine and the subspecialty of pulmonary disease and is a B-reader, examined Claimant twice, once in 1991, and more recently on September 15, 1999.[18] In his report dated November 9, 1999, Dr. Zaldivar noted that Claimant had worked in coal mines for twenty-four and a half years as a beltman and jack setter and that he had smoked about a half pack of cigarettes a day for approximately forty-two years, quitting in 1989. After taking an x-ray, performing pulmonary function and arterial blood gas studies, a metabolic assessment and exercise test which he opined reflected "[p]oor exercise tolerance compatible with severe cardiac deconditioning," and reviewing specified medical records, including the opinions of examining doctors, and finding no radiographic evidence of pneumoconiosis, which would not rule out a diagnosis of pneumoconiosis, he found moderate irreversible airway obstruction, hyperinflation with air trapping, and mild diffusion impairment. On that basis Dr. Zaldivar opined categorically that Claimant does not have coal workers' pneumoconiosis, any dust disease of the lungs, or any pulmonary condition that could be aggravated by his previous work as a coal miner.

Dr. Zaldivar noted a deterioration of breathing capacity since the earlier examination in 1991 attributable exclusively to aging, despite long term moderate airway obstruction reflecting little change since the 1991 examination. He noted that blood gases were normal, far better than Dr. Rasmussen's results, but he did not relate those results to the observed mild diffusion impairment or assess any particular significance to either factor. He did not refer expressly to any impairment of gas exchange

[18] Dr. Zaldivar's reference in his "Comments" to a 1981 examination and test results is apparently a clerical error, as records in evidence show that the examination took place in 1991.

or hypoxia, though a negative reference is deemed implicit in his finding of normal blood gases. Dr. Zaldivar disclosed little reasoning in reaching his negative conclusions regarding the existence of pneumoconiosis or the absence of total disability attributable thereto. However, Dr. Zaldivar opined that Claimant has cardiac deconditioning and possible coronary artery disease "since increasing the heart rate was a limiting factor to exercise," which would limit the work that he could otherwise perform. However, he opined that there was no respiratory or pulmonary limitation in the exercise test. His assessment was based on an erroneously stated "achieved target heart rate of 148 beats/minute or 88% of predicted," although the recorded actual maximum heart rate was 131 beats per minute on the test report. The 131 beats per minute, however, calculates to 88% of the recorded predicted maximum of 148. (E-1)[19]. He opined that Claimant, despite the presence of mild to moderate airway obstruction attributable to past smoking, is capable of performing at least moderate work including his usual coal mine work "as he had described it in the records," subject to any limitation imposed by heart disease. (E-1).

Dr. Tuteur

Dr. Tuteur, who is board-certified in internal medicine and the subspecialty of pulmonary disease, reviewed specified medical records dating from 1979 and including his own report dated July 27, 1991, in a report dated January 24, 2000, and a deposition conducted on August 29, 2000. In his report dated January 24, 2000, Dr. Tuteur noted that Claimant was a coal worker for twenty-four years and smoked a half to one pack of cigarettes a day for approximately fifty years ending in 1989. Based on his review of outpatient records, medical reports, arterial blood gas studies, pulmonary function studies, and chest radiographic reports, Dr. Tuteur opined that Claimant's pulmonary function had declined with age, as anticipated, and that the results of the arterial blood gas studies were within normal limits for someone of Claimant's age. Dr. Tuteur did not find any changes that were compatible with coal worker's pneumoconiosis. Instead, he found that the reduction in maximum oxygen consumption and work was attributable to poor cardiovascular conditioning. Dr. Tuteur concluded that, while Claimant has a primary pulmonary process and is partially disabled, the process and disability are due to cigarette smoking, exercise associated chest pain, and other ailments, unrelated to the inhalation of coal mine dust or the development of coal workers' pneumoconiosis.

Declaring as a basic premise that coal workers' pneumoconiosis and other coal mine dust related disease processes are irreversible, Dr. Tuteur reasoned in part in his January 24, 2000, report that, because Claimant's impairment of gas exchange and hypoxia revealed in March testing during an acute pulmonary exacerbation of COPD returned to normal in September 1999, it could not be coal workers' pneumoconiosis, since the impairment of gas exchange resolved. He explained that there was an abundance of data developed over more than twenty years on which to base his opinion; that

[19]In his deposition Dr. Tuteur referred to 131 as the maximum heart rate in Dr. Zaldivar's test. (E-8 at 22-23) Since the reference to 88% of maximum predicted heart rate to which Dr. Zaldivar referred was apparently correct, and other physicians referred to it also, any adverse effect of the erroneous reference to 148 rather than 131 maximum heart rate appears to be limited.

Dr. Alexander's positive x-ray readings were aberrant among a clear majority of negative readings by well qualified physicians whom Dr. Tuteur knew and respected, and whose readings he had on occasion compared favorably with his own. He recorded that carboxyhemoglobin levels were normal and consistent with a history of a nonsmoker. He identified a primary pulmonary process as "cigarette smoke-induced chronic bronchitis associated with a persistent mild to moderate obstructive ventilatory defect, not associated with a restrictive component, and not associated with persistent impairment of gas exchange," and not related to or aggravated by or caused by coal mine dust or the development of coal workers pneumoconiosis. Dr. Tuteur suggested that Claimant's exercise capacity was limited, not by pulmonary function, but by cardiac output related to cardiovascular conditioning or organic heart disease and other health factors, and that pulmonary function was relatively stable over time, though disabling and somewhat affected by age. (E-3, 8)

Dr. Tuteur was deposed on August 29, 2000, after he had an opportunity to review some additional chest radiographic reports, and recent reports by Dr. Fino and Dr. Cohen. He characterized the change in FEV1 and FEV spirometry measurements, despite some variability, as "a little bit more rapid than one would expect," but typical for someone of Claimant's age and smoking history. He opined that they depicted no more than a moderate obstructive ventilatory defect, and not pneumoconiosis. He characterized the change as a mild slow decline over fifteen years through 1999, which would be attributable to age alone, and which was essentially stable. He characterized the absence of impairment of gas exchange, and recovery after acute exacerbations of chronic obstructive pulmonary disease, as contraindicative of the irreversible process caused by coal workers' pneumoconiosis.[20] He opined that the pulmonary function data collected over a twenty year period reflected the classic course of chronic obstructive pulmonary disease induced by cigarette smoke, a course uncharacteristic of the physiologic abnormalities induced by coal workers' pneumoconiosis and related lung scarring.

Dr. Tuteur explained that the reduction in Claimant's diffusing capacity, despite normal resting

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[20]Dr. Tuteur explained the difference in results obtained from Dr. Rasmussen's exercise blood gas study in May 1999 and Dr. Zaldivar's exercise blood gas study in September 1999 as attributable to Claimant's not having fully recovered from his March exacerbation of chronic obstructive pulmonary disease by May, rather than to the September exercise study's having been stopped prematurely by Dr. Zaldivar, as averred by Claimant. Claimant has asserted Dr. Cohen's opinion that a premature termination prevented the test from showing the abnormalities disclosed by the May 1999 study. Dr. Tuteur explained that the pulse change was about the same on the May and September tests, so that Dr. Zaldivar's having stopped the study at 131 heart beats per minute, which was about 85% of maximum pulse rate, was not premature. He explained that the two tests involved different base lines, but the same general response, which reflected in each case appropriate ventilatory and heart rate reserves at peak exercise, normal increase in PO2 from rest to exercise, modest reduction in maximum oxygen consumption and work load because of poor cardiovascular conditioning, i.e. his heart pumping less than optimum oxygenated blood to reach his muscles.(E-8 at 18, 21-23)

and exercise blood gas study results, would reflect factors other than impaired oxygen gas exchange such as hemoglobin concentration, ventilation perfusion alterations in distribution of blood flow, obesity, and other factors. He explained that Claimant does not have a coal mine dust induced lung disease because of the absence of classical coal workers' pneumoconiosis with its characteristic scarring of the lung parenchyma, irreversible impairment of gas exchange in exercise and at rest, radiographic changes, and typical physical symptoms. He opined that air flow obstruction does occur in the absence of coal workers' pneumoconiosis, but is very unusual in the absence of chronic inhalation of tobacco smoke as reflected in Claimant's fifty year smoking history.

Dr. Tuteur also addressed pertinent medical literature, noting reservations about the methodology of certain studies. He opined that coal mine dust can cause air flow obstruction, but that air flow obstruction in the absence of demonstrable coal workers' pneumoconiosis explainable only by coal mine dust exposure would occur in less than a minuscule 1 to 1 1/2% of miners, compared with the tenfold likelihood of airflow obstruction that would occur in 15 to 20% of cigarette smokers. Thus, he concluded that it was ten times more likely than not that the data related to Claimant reflected chronic inhalation of tobacco smoke over fifty years rather than the inhalation of coal mine dust. Dr. Tuteur explained that a diagnosis of COPD is properly established by clinical data; that its severity is assessed by spirometry; and that there is no positive dose response between coal mine dust exposure and FEV1 decline, although there is such a dose response between cigarette smoke exposure and FEV1 decline, though it is not unity, and must be distinguished from the natural decline of FEV1 attributable to aging. He also opined that the additive effects of tobacco smoke and coal mine dust would be minuscule, and not evident in Claimant, and that the FEF 25-75 measurement in pulmonary function testing identifies early airways disease, but does not differentiate air flow obstruction due to cigarette smoke from air flow obstruction due to coal mine dust or other dusts. (E-8)

Dr. Fino

Dr. Fino, who is board-certified in internal medicine and the subspecialty of pulmonary disease and a B-reader, provided a report dated February 14, 2000, in which he based his conclusions on his review of specified medical records, including x-rays, pulmonary function studies, and arterial blood gas studies, dating from 1971 to 1999. He opined that Claimant does not suffer from an occupationally acquired pulmonary condition as a result of coal mine dust exposure, based on four premises. First, the majority of x-rays were negative for pneumoconiosis. Second, the spirometric evaluations showed obstructive ventilatory abnormality based on the reduction in the FEV1/FVC ratio in the absence of any interstitial abnormality, with small airway flow more reduced than large airway flow consistent with conditions such as cigarette smoking, pulmonary emphysema, non-occupational chronic bronchitis, and asthma, but not inhalation of coal dust. Third, the reduction in the diffusing capacity is consistent with emphysema due to smoking. And fourth, there is no impairment in oxygen transfer because Claimant does not become hypoxic with exercise. He declared that the variable resting hypoxia is not consistent with a coal mine dust related condition.

Dr. Fino concluded that, despite Claimant's abnormal pulmonary system, and mild respiratory impairment due to smoking, he has the physiologic capacity, from a respiratory standpoint, to perform

all of the requirements of his last coal mining job, although Dr. Fino made no explicit analysis of those requirements in the report. Dr. Fino opined that, of the two risk factors for Claimant's impairment, coal mine dust exposure and smoking, the smoking related impairment is consistent with the clinical information, because Claimant's loss of respiratory capacity, even if affected by industrial bronchitis due to coal mine employment, would be in the 200 cc. range, whereas the statistical decrease of FEV1 in working miners tends not to be clinically significant. (E-6)

Before his deposition taken on September 8, 2000, Dr. Fino reviewed rereadings of certain x-ray films and additional medical records from 1985 to 2000, including his medical report made on February 14, 2000, and his x-ray readings reviewed on March 14, 2000. Dr. Fino agreed with Dr. Cohen that smoking and coal mine dust exposure can cause the same or quite similar obstructive abnormality or impairment. He testified that Claimant has a mild obstructive impairment with pulmonary emphysema in the absence of an oxygen transfer impairment, and a concomitant reduction in diffusing capacity, which suggests the destruction of lung tissue and emphysema, but no permanent impairment in oxygen transfer. The absence of oxygen transfer impairment, he opined, was evident from the results of five exercise studies in 1985, 1990, 1991, and September 1999, showing no decreases in blood oxygen levels with exercise, although Dr. Rasmussen's May 1999 study showed a unique minimal drop in PO2 from 72 at rest to 67, which Dr. Fino opined was not disabling and which he noted was variable. The obstruction is evidenced by a reduction in the ratio of the FEV1 to FVC and intermittent reductions of the FEV1 in 1979, 1990, and 1999. However, Dr. Fino concluded that, because the periods of reductions were followed by periods when the FEV1 values were within the normal range, Claimant's pulmonary abnormality is more consistent with a smoking related condition than coal worker's pneumoconiosis. He stated that such emphysema may or may not cause an impairment in oxygen transfer. Dr. Fino stated that in this case he did not believe, based on five exercise arterial blood gas studies, that there was such an impairment in oxygen transfer or related disabling abnormality.

Dr. Fino's conclusion, however, was based in part on his assumption of equivalency of the maximum heart rates of Dr. Rasmussen's and Dr. Zaldivar's exercise studies noted by him as 153 and 148 beats per minute, respectively. Claimant has argued, and Dr. Tuteur testified, however, that Dr. Zaldivar's study actually terminated at 131 beats per minute. Dr. Zaldivar's test records confirm 131 beats per minute, but also record that the achieved maximum rate was 88% of predicted. Based on this discrepancy Dr. Fino opined that the May 1999 and September 1999 studies were comparable with respect to the extent of exercise, and that Claimant had reached an appropriate 88% of his predicted maximum heart rate, which appears to be correct despite the error in recorded maximum heart rate. Dr. Fino declared that exercise to 80% of predicted heart rate is normal practice, and in this was corroborated by Dr. Tuteur.

Dr. Fino testified that the Claimant's reduced diffusing capacity was due to emphysema, but that its effect would contribute only to the Claimant's mild overall pulmonary impairment. Although he conceded that the measurement of the FEV 25-75 is not a reliable test to determine impairment, he referred to studies indicating that the effects of coal mine dust in nonsmokers tends to be some obstruction in the smaller airways, and he saw a disproportionately large reduction of small airway

flow when compared to large airway flow in the case of the Complainant that was more indicative, in his opinion, of a smoking related abnormality than one related to coal mine dust. Dr. Fino opined that an 800 cc. drop in Claimant's FEV1 over the fourteen year period from 1985-1999 was typical of a smoking related abnormality, but atypical of a coal mine dust related abnormality. He testified that there was a mild overall pulmonary impairment, and that Claimant was not prevented from doing his last coal mine job which required a lot of shoveling as described by Dr. Rasmussen and Dr. Zaldivar, and occasional carrying of fifty pound rock dust bags. Dr. Fino stated that carrying fifty pound rock dust bags would be heavy manual labor, but that he understood that Claimant did not do that on a regular eight hour per day basis, and that Claimant's last job on the long wall required only intermittent heavy labor, so that Claimant could still do it from a pulmonary point of view.

In addition, Dr. Fino stated that, because it is rare for simple pneumoconiosis to progress after the miner has left the mines, Claimant's progression was more consistent with a history of smoking than pneumoconiosis. Dr. Fino relied upon a perceived pattern of abnormality showing a reduction in the diffusion with elevated lung volumes, variability of blood gases, and reduction of approximately 800 cc. in FEV1 over the fourteen year period from 1985 to 1999, averaging 50-60 cc. per year, as typical of a smoking related abnormality, but atypical of a coal mine dust related abnormality. He asserted that the medical literature indicates that FEV1 typical of a coal mine dust related abnormality does not decrease at that accelerated rate characteristic of a smoker. He also opined that because it is rare for simple pneumoconiosis to progress after the miner has left the mines, Claimant's progression was more consistent with a history of smoking than with pneumoconiosis. He also referred extensively to pertinent medical literature, conceding that coal mine dust causes obstructive pulmonary abnormality, but contending that a primary disagreement with Dr. Cohen is Dr. Fino's conviction that statistically significant obstructive abnormality in miners, as opposed to nonminers without pneumoconiosis on x-ray, cannot be equated with clinical significance, and that studies have not shown it to be equivalent. He insisted that whether obstruction causes disability due to coal mine dust, as it can in some cases, must be determined on a case by case basis.(E-9)

Dr. Cohen

Dr. Cohen, who is board-certified in internal medicine, the subspecialty of pulmonary disease, and a B-reader, reviewed specified medical records as a basis for his report dated August 24, 2000. He reviewed Claimant's occupational history of approximately 24 years as an underground miner, noting that much of it was before modern dust control regulations, and that Claimant's last job required him to shovel coal many times during the day. He noted that Claimant also had worked as an automobile mechanic, not exposed to asbestos. Dr. Cohen noted that Claimant's prior medical history was essentially immaterial, and that there was a conflicting smoking history ranging from 17.5 to 45 pack years ending, according to Dr. Rasmussen's report, in 1979, and, according to a 1990 examination by Dr. Ranavaya for the Department of Labor in 1989. Dr. Zaldivar indicated that Claimant had stopped smoking in 1979 and later resumed. This tribunal finds that Claimant has a substantial smoking history of approximately 45 years of between a half and a full pack of cigarettes per day.

Dr. Cohen's review included several reports of physical examinations by Dr. Zalidivar and Dr. Rasmussen in 1999, and others from 1991 and earlier, and consulting medical opinions by Dr. Fino in 2000, by Dr. Tuteur in 1991, but not his report in 2000, and by Dr. Dahhan in 1988. He also reviewed the history of chest x-rays, pulmonary function tests, arterial blood gas studies, and cardiopulmonary exercise testing, over essentially the same time period. He concluded, "The sum of the medical evidence in conjunction with this patient's work history indicates that this patient's approximately 24 years of underground coal dust exposure as well as his 17.5 to 45 pack years of exposure to tobacco smoke was significantly contributory to the development of his moderate obstructive lung disease, diffusion impairment, and abnormal gas exchange noted on exercise arterial blood gases. This degree of impairment would prevent him from performing his last coalmine employment." Dr. Cohen explained that numerous pulmonary function tests demonstrate a clear progression of impairment from mild to moderate obstructive lung disease. He opined that the moderate diffusion impairment, significant hypoxemia at rest, and gas exchange abnormalities with exercise establish a degree of respiratory impairment that would disable Claimant for his last job because it required him to shovel coal many times during the day.

Dr. Cohen's analysis of the evidence before him noted 24 years of relatively unprotected underground high exposure to coal dust, progressive symptoms of chronic lung disease, including spirometry testing consistently showing obstructive lung disease progressing from mild to moderate, in most instances nonresponsive to bronchodilators, caused, he opined, by Claimant's extensive exposure to tobacco smoke and coal mine dust. He pointed out that lung volume measurements ruled out restrictive lung disease, and that the evidence of diffusion impairment as early as 1990 consistently indicated an abnormality in gas transfer and pattern consistent with an altered gas exchanging surface consistent with interstitial lung disease and emphysema, both of which can be caused by coal dust exposure. He noted a progression from normal resting blood gas study results in 1985 to significant abnormalities in gas exchange with exercise and exercise induced hypoxemia, which he attributed to Claimant's lengthy tobacco smoke and coal mine dust exposures. He explained that the exercise study of September 15, 1999, which he erroneously attributed to Dr. Fino rather than Dr. Zaldivar, did not show the abnormalities disclosed on Dr. Rasmussen's earlier study of May 28, 1999, because he asserted that the September study was terminated prematurely by the physician. On the other hand, Dr. Rasmussen had allowed the Claimant to exercise to his maximum capacity. He noted "substantial and significant x-ray evidence for simple pneumoconiosis," notwithstanding negative chest x-ray readings, and no history of other occupational exposure which could cause coal workers' pneumoconiosis or obstructive lung disease.

Dr. Cohen assessed certain of Dr. Fino's assertions, particularly that questioning the relationship between coal dust exposure and obstructive lung disease. Dr. Cohen cited medical literature which, he explained, supported his critique and was not undermined by Dr. Fino's criticisms. He challenged Dr. Fino's attribution of clinical information to a smoking related impairment based on Claimant's drop in FEV1 of greater than 200cc. as based on a false premise that identical exposures of coal dust will decrease the FEV1 of all miners to the same degree, but identical exposures of tobacco smoke will affect individuals differently. Dr. Cohen asserted that there is no evidence that the decline in lung function due to coal dust occurs in that manner, or that it would not vary with

individual sensitivity, as demonstrated in several valid studies.

Dr. Cohen took issue with Dr. Fino's criticisms of numerous studies comprising what he characterized as a "huge body of literature which has accumulated showing a relationship between coal dust exposure and obstructive lung disease," including large NIOSH studies published throughout the 1990's. He also points out that Dr. Fino cites only two studies, one using a very small universe and lacking dust sampling data, one with a "highly selected population of miners" with primitive measure of exposure, and a decades old article of Dr. W.K.C. Morgan, concluding that coal dust causes only insignificant decreases in FEV1. Citing relatively recent NIOSH studies, and other medical literature, Dr. Cohen contradicted the assertion that obstructive disease cannot be caused by coal dust exposure, and asserted that "obstructive airways disease, bronchitis, with or without significant obstruction, and emphysema also result from coalmine dust exposure. These can occur in the presence or absence of CWP and can be associated with significant impairment." He cited a 1998 text used by trainees in pulmonary medicine developed by identified professional organizations that states that the effects of dust exposure on lung function vary with the amount, and are significant even after adjusting for smoking habits, and that "[c]oal dust and tobacco smoke produce similar decrements in lung function." Dr. Cohen declared that "[t]here are no similar types of scientific studies refuting any of the conclusions reached by these well-known and respected scientists and researchers." He declared, "By stating that coal dust exposure cannot result in clinically significant airways obstruction unless others (sic) factors are present, (or absent), he expresses an opinion that is contrary to an extremely large volume of medical evidence."

In particular, citing particular studies, Dr. Cohen challenged Dr. Fino's contention that Claimant's pulmonary impairment cannot be due to coal dust exposure since his disease progressed after he stopped mining. Dr. Cohen also challenged Dr. Fino's contention that, since Claimant's lung function did not deteriorate while he was working, and that the pattern of obstruction reflected in a more severely reduced FEF 25-75 than FEV1 indicates small airways disease induced by tobacco smoke rather than coal dust. In regard to the latter contention, Dr. Cohen contends that "[t]here are no data whatsoever in the literature to support this conclusion," and points out that Dr. Crapo had explained the elimination of that measure for categorization of airway obstruction as having not proved a significantly useful measurement. Dr. Cohen concludes that the pertinent literature tends to confirm the association of increased respiratory symptoms and decline in FEV1 associated with mining, independent of the effect of cigarette smoking, and that the effect of one year of underground mining is roughly equivalent to one year of cigarette smoking in producing a decline in FEV1.

Conclusions of Law and Discussion

Benefits under the Act are awardable to persons who are totally disabled due to pneumoconiosis within the meaning of the Act. For the purpose of the Act, pneumoconiosis, commonly known as black lung, means a chronic dust disease of the lung, and its sequelae, including respiratory and pulmonary impairments arising out of coal mine employment. A disease arising out

of coal mine employment includes any chronic pulmonary disease resulting in respiratory or pulmonary impairment significantly related to, or substantially aggravated by, dust exposure in coal mine employment. §718.201. In order to obtain federal black lung benefits, a claimant must prove by a preponderance of the evidence that: "(1) he has pneumoconiosis; (2) the pneumoconiosis arose out of his coal mine employment; (3) he has a totally disabling respiratory or pulmonary condition; and (4) pneumoconiosis is a contributing cause to his total respiratory disability." *Milburn Colliery Co. v. Hicks*, 138 F.3d 524, 529, 21 B.L.R. 2-323 (4th Cir. 1998); *see Dehue Coal Co. v. Ballard*, 65 F.3d 1189, 1195, 19 B.L.R. 2-304 (4th Cir. 1995); 20 C.F.R. §§718.201-.204 (1999); *Gee v. W.G. Moore & Sons*, 9 B.L.R. 1-4 (1986).

Material Change in Conditions

Since the instant claim was filed more than one year after the denial of Claimant's previous claim, it is considered a duplicate or subsequent claim under the Act. §725.309. Under the pre-amended regulations, which apply to this case pursuant to §725.2(c), a subsequent claim shall be denied on the grounds of the prior denial unless the claimant demonstrates that there has been a material change in conditions. §725.309(d) (pre-amended). To prove a material change in conditions, a claimant must prove at least one of the elements previously adjudicated against him, based on newly submitted probative medical evidence of his condition not available at the time of the prior claim. *Lisa Lee Mines v. Director, OWCP,* [Rutter], 86 F.3d 1358, 20 B.L.R. 2-227 (4th Cir. 1996) (*en banc)*. The previous denial was based on the finding that Claimant did not establish that he was totally disabled by pneumoconiosis (D-35-33). The threshold issue in this subsequent claim, therefore, has two components, whether Claimant has proved that he is totally disabled by a pulmonary or respiratory impairment, and whether coal workers' pneumoconiosis, as broadly defined under the statute and regulations, has significantly contributed to that impairment. Neither the pulmonary function studies, nor the arterial blood gas tests by themselves establish pulmonary disability by a preponderance of the material evidence of record weighed under applicable regulatory standards, despite a qualifying resting arterial blood gas test administered by Dr. Rasmussen in May 1999. The preponderance of that evidence is nonqualifying. There is no evidence of cor pulmonale. Therefore, the opinions of five physicians provided after the denial of benefits in 1992 by Judge Lawrence are necessarily determinative of whether there has been a material change in conditions since 1992. §718.204(2) Judge Lawrence found the existence of pneumoconiosis caused by the Claimant's coal mine employment. That finding is not supported by the current record. The opining physicians disagree as to the extent of pulmonary impairment and its disabling effect, as well as cause. Claimant has the burden of proving a material change in conditions since the last denial, and the elements of entitlement.

Total Disability Due to Pneumoconiosis

To establish entitlement, a claimant must prove by a preponderance of the evidence that he is totally disabled due to pneumoconiosis. A miner is considered totally disabled due to pneumoconiosis if pneumoconiosis is a substantially contributing cause of the miner's totally disabling respiratory or pulmonary impairment. §718.204(c)(1). Pneumoconiosis is a "substantially contributing cause" of

the miner's disability if it has a material adverse effect on the miner's respiratory or pulmonary condition, or it materially worsens a totally disabling respiratory or pulmonary impairment which is caused by a disease or exposure unrelated to coal mine employment. *Id.*

To establish total disability, Claimant must prove that he is unable to engage in either his usual coal mine work or comparable and gainful work as defined in §718.204. Section 718.204(b)(2) provides the criteria for determining whether a miner is totally disabled. These criteria are: (i) pulmonary function tests qualifying under applicable regulatory standards; (ii) arterial blood gas studies qualifying under applicable regulatory standards; (iii) proof of pneumoconiosis and cor pulmonale with right sided congestive heart failure; or (iv) proof of a disabling respiratory or pulmonary condition on the basis of the reasoned medical opinions of a physician relying upon medically acceptable clinical and laboratory diagnostic techniques. If there is contrary evidence in the record, all the evidence must be weighed in determining whether there is proof by a preponderance of the evidence that the miner is totally disabled by pneumoconiosis. *Shedlock v. Bethlehem Mines. Corp.*, 9 B.L.R. 1-95 (1986).

Under §718.204(b)(2)(i), both pre-and post-bronchodilator pulmonary function studies must be weighed when reviewing relevant evidence. *See Strako v. Ziegler Coal Co.,* 3 B.L.R. 1-136 (1981). The fact-finder must determine the reliability of a study based upon its conformity to the applicable quality standards, and must consider the medical opinions of record regarding reliability of a particular study. *Robinette v. Director, OWCP*, 9 B.L.R. 1-154 (1986); *Casella v. Kaiser Steel Corp.*, 9 B.L.R. 1-131 (1986). The record indicates that the Claimant underwent two pulmonary function studies in connection with the pending claim. Of these two tests, only the study performed on September 15, 1999, utilized a pre- and post-bronchodilator test (E-1). The other test, performed on May 28, 1999, was validated by Dr. Ranavaya (D-13, 16). Neither of these studies produced qualifying values. Therefore, the preponderance of the pulmonary function study evidence does not establish total disability by pneumoconiosis pursuant to §718.204(b)(2)(i).

Under §718.204(b)(2)(ii), arterial blood gas studies conducted before and after exercise, must be weighed when reviewing relevant evidence. *Sturnick v. Consolidation Coal Co.*, 2 B.L.R. 1-972 (1982). Two resting and exercise blood gas studies were performed in 1999. Of these two studies, only the May 28, 1999 study produced a qualifying result for the resting portion of the study[21] (D-13,

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[21] This study was validated by Dr. Ranavaya. In a supplemental brief dated December 6, 2000, Claimant suggested that two doctors erred in referring to Dr. Zaldivar's arterial blood gas test results obtained on September 15, 1999, and incorporated in his November 9, 1999, report which recorded Claimant's maximum achieved heart rate as 148, when it was in fact 131. Claimant contends that the discrepancy tends to suggest that Dr. Zaldivar terminated the test prematurely, so that sufficient exercise and heart rate were not achieved accurately to disclose an impairment of gas exchange, or oxygen desaturation, as disclosed by the test conducted by Dr. Rasmussen in May. Claimant contends that the mistake reflected on the credibility of the opinions of Dr. Zaldivar and, to a limited extent, Dr. Cohen, but also Drs. Fino and Tuteur, because those opinions were based on the erroneous assumption that the heart rate reached in Dr. Zaldivar's test

16). Claimant referred to five arterial blood gas studies, the results of which are not of record, performed when Claimant was hospitalized for shortness of breath, cough, and chest pain. Since these tests were performed during an acute episode from March 2, 1999 to March 8, 1999, and are not of record, they obviously have no significant probative value, except in the context of the opinions of physicians who have referred to them. There is not a preponderance of qualifying arterial blood gas studies which establishes disability under §718.204(b)(2)(ii). Since there is no evidence of cor pulmonale with right-sided congestive heart failure, Claimant has not proved total disability pursuant to §718.204(b)(2)(iii).

Since the several opining physicians disclosed significantly different conceptions of Claimant's last coal mine work, this tribunal finds that the weight of the evidence of record establishes that Claimant engaged in moderately hard manual labor, consisting of relatively constant shoveling of coal, generally in low, four to four and a half foot coal, in his last coal mine job. He had extensive coal mine dust exposure throughout his career as an underground coal miner. Documentary evidence from his employer and Claimant's testimony at the hearing establish that he worked as a belt man for several months as his last coal mine work before retirement. His testimony establishes that in that capacity he shoveled coal "all day long" by hand from under the belts onto the belts, sometimes under pressure for speed to keep the belts clear. Dr. Rasmussen referred in his medical report to other hard manual labor, including carrying fifty pound rock dust bags hundreds of feet, an activity which was referred to directly by Dr. Fino, and implicitly by Dr. Zaldivar, in assessing the demands of Claimant's relevant coal mine work. It does not appear that any of those activities were part of Claimant's last coal mine employment as a belt man. They appear to have been associated only with his prior work as a jack setter, not his work as a beltman. This tribunal so finds.

Claimant's testimonial description of his earlier work as a shot firer and many years as a longwall propman and jack setter, demonstrated that both activities involved moderate to heavy manual labor. *See Hall v. Director, OWCP*, 1995 U.S. App. LEXIS 71 (4th Cir. 1995)(unpublished)(Last coal mine job setting jacks, hanging cable, and carrying 50-pound bags of rock dust for 65 feet implicitly recognized as heavy manual labor.)[22] This tribunal concludes on the

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was 148, not 131. However, it is apparent from Dr. Tuteur's detailed deposition testimony that his analysis correctly assumed a heart rate of 131 at the termination of Dr. Zaldivar's test, a heart rate which was 81% to 87% of predicted. Consequently, according to Dr. Tuteur, the test was not terminated prematurely because a heart rate at that level of predicted is sufficient for a reliable assessment. He suggested, in a carefully reasoned opinion, that the test results were not essentially inconsistent, showed no significant impairment of gas exchanges during rest or exercise, and to the extent that they were inconsistent, the difference was probably attributable to Claimant's incomplete recovery and incomplete reconditioning after his March hospitalization for an acute exacerbation of COPD. Consequently, this tribunal concludes that Claimant's concern does not substantially affect the outcome of the case. (E-8 at 21-25)

[22]A copy of this unpublished decision was annexed to Claimant's brief.

basis of this evidence that Claimant's last coal mine employment generally demanded a capacity to perform relatively continuous moderately hard manual labor. Inability to perform such work would qualify Claimant as disabled. This tribunal finds that Claimant has not proved that he cannot perform such work because of a respiratory or pulmonary disability.

This tribunal concludes that Claimant has not proved that there has been a material change in conditions pursuant to §725.309 that would entitle him to a review of the claim on the merits. Neither a preponderance of qualifying pulmonary function test results nor a preponderance of qualifying arterial blood gas study results establish total disability under applicable regulations. This tribunal concludes that the physicians' opinion considered under §718.204(b)(2)(iv) do not establish the existence of a totally disabling respiratory or pulmonary condition or total disability due to pneumoconiosis. Dr. Zaldivar, who is a qualified pulmonary specialist, and conducted the most recent pulmonary examination and objective testing, concluded categorically that Claimant does not have coal workers' pneumoconiosis and that he has no pulmonary disability or exercise limitation therefrom. He did suggest the possibility of cardiac limitations, which are distinguishable from pulmonary disability. Dr. Fino, similarly qualified, reached a similar conclusion, that Claimant's mild obstructive pulmonary impairment was not enough to preclude Claimant from returning to his last coal mine work.

The opinion of Dr. Tuteur, also board certified in internal medicine and the subspecialty of pulmonary disease, that Claimant has a primary pulmonary process and is partially disabled, but that the process and disability are due to cigarette smoking, exercise associated chest pain, and other ailments, unrelated to inhalation of coal mine dust or the development of coal workers' pneumoconiosis, does not establish that Claimant is disabled from coal mine work by a pulmonary condition or impairment. The opinion does not disclose the extent to which cardiac or other infirmities affect the mild or moderate obstructive impairment, and may rule out total disability from pulmonary impairment. Nor did Dr. Tuteur assess the extent of any disability against the particular exercise requirements of Claimant's last coal mine work. Consequently, Dr. Tuteur's opinion does not establish a pulmonary condition incapacitating Claimant from performing his last coal mine work as a beltman, in contradiction of the opinions of Dr. Zaldivar and Dr. Fino.

Dr. Rasmussen found total pulmonary disability due to coal mine dust and smoking at his earlier examination of the Claimant in 1990, as well as his May 1999 examination. Thus, there is no material change in conditions established by his May 1999 opinion. Moreover, there is substantial credible evidence that the allegedly disabling abnormalities that he identified as a result of his May 1999 testing reflected less than full recovery from an acute exacerbation of COPD in March 1999, and that those abnormalities were resolved by the time of Dr. Zaldivar's examination and tests in September 1999. Dr. Cohen's opinion that Claimant is totally disabled by the moderate obstructive pulmonary impairment attributable to coal mine dust and smoking is given less weight than the opinions of Dr. Zaldivar and Dr. Fino because it depends almost entirely upon Dr. Rasmussen's assessment, which does not consider any possible effect of the March exacerbation or the demonstrable recovery by September 1999. In addition, this tribunal is not convinced by Dr. Cohen's challenge to the validity of Dr. Zaldivar's test results, which caused Dr. Cohen, in effect, to disregard

them in reaching his conclusion. Dr. Cohen's opinion is not persuasive in other respects, so that it does not establish a preponderance of evidence that Claimant has a disabling pulmonary condition under §718.204(b)(2)(iv) and §718.204(b)(1). Thus, no material change in conditions has been established.

The Weight of Dr. Tuteur's Opinion

This tribunal finds Dr. Tuteur's opinion regarding Claimant's pulmonary condition to be the most precisely reasoned and broadly based, especially in his deposition testimony, despite its reservations concerning Dr. Tuteur's assessment of disability. Because of the detail and logic of his analysis of Claimant's pulmonary condition, Dr. Tuteur is the most persuasive of the several physicians, although he only examined medical records and did not examine the Claimant. This tribunal also finds Dr. Tuteur's professional credentials as board-certified in internal medicine and pulmonary disease, and as a long term tenured member of the faculty of Washington University Medical School in St. Louis, to be the most impressive among the opining physicians. In reaching his conclusions he also extensively and independently assessed the underlying data when he considered the reports of other physicians. He reviewed extensive medical records covering a span of approximately two decades of Claimant's medical history from 1979 to 2000. Significantly, he characterized that history as reflecting the classic course of chronic obstructive pulmonary disease induced by cigarette smoke, and lacking the classical physiologic abnormalities induced by coal workers' pneumoconiosis and related lung scarring.

Buttressing Dr. Tuteur's credibility is the fact that he assessed the validity of Dr. Zaldivar's September 1999 exercise blood gas study based on its termination at the actual maximum heart beat per minute of 131, as reflected in the technical report, despite Dr. Zaldivar's reliance in making his stated assessment upon the higher predicted maximum of 148 rather than the lower actual heart rate of 131. This tribunal is also persuaded by Dr. Tuteur's opinion that Dr. Rasmussen's May 1999 test was conducted before Claimant would have fully recovered from his acute exacerbation of chronic obstructive pulmonary disease which hospitalized him in March 1999, and that both Dr. Rasmussen's and Dr. Zaldivar's tests were valid and comparable in terms of exercise levels and heart rates achieved. His analysis also refutes Dr. Cohen's opinion that, because Dr. Zaldivar's test was allegedly stopped prematurely, it did not disclose abnormalities disclosed by Dr. Rasmussen's test in May 1999, approximately four months earlier.

In addition, regarding the cause and extent of Claimant's pulmonary impairment, Dr. Tuteur explained the significance of the crucial disputed aspects of Claimant's reduced diffusing capacity, which he opined, contrary to the opinions of Dr. Rasmussen and Dr. Cohen, did not involve a persistent impairment of gas exchange. Dr. Tuteur also explained that Claimant's persistent mild to moderate obstructive ventilatory defect was not associated with persistent impairment of gas exchange. Dr. Tuteur made clear that the absence of persistent impairment of gas exchange eliminates a critical potential component of pulmonary disability. Dr. Tuteur did not make an explicit analysis of the demands of Claimant's last coal mine work, because, consistent with his analysis of Claimant's medical condition, he concluded that Claimant was partially disabled by a variety of health causes,

none of which were related to the inhalation of coal mine dust or the development of coal workers' pneumoconiosis. Thus, he may be deemed to have implied, and this tribunal infers, that any pulmonary disability that Claimant had was insufficient to preclude Claimant from doing his last coal mine work.

Most significantly, Dr. Tuteur opined that Claimant's pulmonary function, particularly as reflected in the change in FEV1 and FEV spirometry measurements, had declined with age, as well as fifty year smoking history, as would be expected, but that the results of the arterial blood gas studies were normal for someone of Claimant's age. Claimant was seventy-four in 2000 when Dr. Tuteur made his report. Dr. Tuteur opined categorically that there were no changes that were compatible with pneumoconiosis, in part because of the irreversibility of coal mine dust related disease processes. Critical to his opinion was the fact that the impairment of gas exchange and hypoxia revealed in March testing during the acute exacerbation of COPD that hospitalized Claimant in March 1999 were resolved by September 1999, as reflected in Dr. Zaldivar's testing, but would not yet have been fully resolved in May 1999, as reflected in Dr. Rasmussen's somewhat abnormal test results. Dr. Tuteur on deposition also persuasively interpreted the medical literature about which he was questioned as establishing that exposure to coal mine dust could cause chronic obstructive pulmonary disease, but does so very rarely in nonsmoking miners, as opposed to miners who have smoked. He also opined that the additive effect of coal mine dust exposure and cigarette smoking as a cause of chronic obstructive pulmonary disease was minuscule with respect to coal mine dust exposure. Consequently, Dr. Tuteur's opinion is credited as consistent with the conclusion that Claimant does not have a totally disabling pulmonary impairment or a pulmonary impairment caused by inhalation or the effects of coal mine dust or coal workers' pneumoconiosis.

The Weight of Dr. Fino's Opinion

Because Dr. Fino's opinion corroborates Dr. Tuteur's in certain respects, it increases the probative weight of both opinions. Dr. Fino, like Dr. Tuteur, is board-certified in internal medicine and the subspecialty of pulmonary disease. Dr. Fino is also a B-reader. Like Dr. Tuteur, Dr. Fino reviewed medical records, purportedly extending back to 1971, but did not examine the Claimant, and declared that the quality of their respective opinions was not adversely affected thereby. Like Dr. Tuteur, but with less explicit reasoning, Dr. Fino concluded that the majority of x-rays he reviewed were negative for pneumoconiosis. Like Dr. Tuteur he found a reduction in diffusing capacity, which he explained would be reduced if lung tissue has been destroyed. He characterized the condition as consistent with emphysema due to smoking, but he found no impairment in oxygen transfer because Claimant did not become hypoxic with exercise, and he opined that variable resting hypoxia would not be consistent with a coal mine dust related condition. The variable resting hypoxia was reflected in the different results in Dr. Rasmussen's May 1999 blood gas tests, which disclosed minimal resting hypoxia, and Dr. Zaldivar's September 1999 blood gas tests, which the opining physicians said did not disclose such hypoxia.

Dr. Fino's opinion that Dr. Zaldivar's September 1999 study was not prematurely stopped is also credited, though the reliability of his opinion is somewhat impaired by his failure to appreciate from the underlying recorded test results the error in Dr. Zaldivar's reference to the maximum

achieved heart rate. Dr. Fino premised his assumption of equivalency of the Rasmussen and Zaldivar test results in demonstrating the absence of impairment of blood gas exchange on the comparability of Dr. Rasmussen's maximum pulse rate of 153 heart beats per minute and Dr. Zaldivar's erroneous reference to a maximum pulse rate of 148 heart beats per minute, though he was also aware of the correct percentage of the predicted maximum heart rate, 88%, which was actually achieved. Dr. Fino's assessment of the results of the two tests as generally comparable and not compromised by premature termination by Dr. Zaldivar, is generally consistent with Dr. Tuteur's assessment, so that his conclusions regarding the tests are generally reasoned and credible.

Dr. Fino declared that both cigarette smoking and coal mine dust exposure can cause obstructive impairment reflected in the FEV1/FVC ratio, but that the flow volume loops which measure speed of air flow through lungs show significant reduction in speed of air flow through mid to small airways as measured by FEV25-75. That phenomenon, he opined, is pretty typical of smoking, so that Claimant's obstructive impairment is not the result of coal mine dust exposure. He conceded, however, that FEV25-75 is not a reliable determinant of impairment. In an extensive analysis of pertinent medical literature, Dr. Fino, in agreement with Dr. Cohen, opined that smoking and coal mine dust exposure can cause the same obstructive pulmonary impairment. However, he declared that his difference with Dr. Cohen related to the perception that statistical significance, which he defined as meaning not by chance, of obstructive abnormality in coal miners cannot be equated with clinical significance, which he opined would suggest that an obstructive abnormality is disabling. Dr. Fino stated that he does not dispute studies that have established that some miners may experience some reductions in the FEV1 as a result of coal dust inhalation and in the absence of a positive x-ray, but that the medical studies do not establish that such an obstruction is necessarily disabling. He opined that whether obstruction causes disability due to coal mine dust, as it can in some cases, must be determined on an individual basis.

Dr. Fino's conclusion that Claimant's pulmonary impairment, which Dr. Fino characterized as mild overall, would not preclude him from performing his usual coal mine employment is not refuted on this record. Dr. Fino, unlike Dr. Tuteur, apparently did not consider the various other infirmities with which Dr. Tuteur noted that Claimant was afflicted. Apparently, the conclusion that the impairment was mild can be attributed to Dr. Fino's conclusion that there was a mild obstructive impairment related to pulmonary emphysema and the destruction of lung tissue. But he reasoned that the absence of an impairment in oxygen transfer confirmed by the results of five exercise arterial blood gas studies conducted over time effectively reduced the likelihood of a related disabling abnormality attributable to that cause. Dr. Fino apparently based his conclusion that Claimant was not disabled on an assumption that the shoveling involved was not heavy manual labor, and that carrying fifty pound rock dust bags would not comprise heavy manual labor if it were only done intermittently rather than eight hours a day continuously. Because this tribunal has concluded that Claimant's shoveling described in the record would be moderately hard manual labor; because carrying rock dust bags was apparently not part of Claimant's work as a beltman; and because, therefore, Dr. Fino referred to a greater work demand than was actually the case, Dr. Fino's conclusion that Claimant is not disabled from performing his usual coal mine employment is given significant weight. Dr. Fino cited a variety of factors which he reasoned would rule out coal mine dust exposure as a significantly contributing

cause to Claimant's mild impairment. In regards to causation, his reasoned assessment appears to be substantially consistent with that of Dr. Tuteur, and so it is given significant weight, although the validity of his theory that the FEF25-75 spirometric results suggesting small airways disease attributable to smoking rather than coal mine dust exposure is disputed.

The Weight of Dr. Zaldivar's Opinion

Like Dr. Tuteur and Dr. Fino, Dr. Zaldivar is board-certified in internal medicine and the subspecialty of pulmonary disease, and like Dr. Fino he is a B-reader. Unlike those physicians he examined Claimant, but like both Dr. Tuteur and Dr. Fino he also examined specified medical records pertaining to Claimant. Like them he concluded in a sparely reasoned opinion based upon objective evidence and documentation that Claimant is not afflicted with coal workers' pneumoconiosis or any disabling dust disease of the lungs. Like Dr. Tuteur he noted, in light of his earlier examination of Claimant in 1991, that Claimant's breathing capacity reflected only the deterioration of aging. Dr. Zaldivar's failure to explain in greater detail his conclusions, the significance of his finding of normal blood gases, which he characterized as far better than Dr. Rasmussen's test results, or any relationship of those findings to the observed mild diffusion impairment, which had concerned the other doctors, deprives his opinion of reasoning that would give it greater credibility. Also, his opinion does not deal explicitly with such crucial issues as the variability of the impairment of gas exchange evident in the March hospitalization and Dr. Rasmussen's May 1999 blood gas tests, which was deemed significant by Dr. Tuteur and Dr. Fino, but which he referred to only obliquely. Thus, his opinion is not helpful in assessing the disputed assessments of the significance of those factors. The controversy surrounding his termination of his September blood gas study, and his erroneous referral to the predicted rather than the actual maximum heart rate for analytical purposes, is not deemed a substantial defect, since it does not appear to have adversely or erroneously affected his essential conclusions.

Also, like Dr. Tuteur and Dr. Fino, Dr. Zaldivar found that x-ray evidence did not establish the existence of pneumoconiosis. He agreed with Dr. Tuteur that the state of Claimant's cardiac conditioning could limit his work as a coal miner, and suggested the possibility of heart disease. He also observed the existence of a mild diffusion impairment, but did not explicitly assess its significance. His conclusion that Claimant's mild to moderate airway obstruction attributable to past smoking would allow him to perform at least moderate work including his usual coal mine work "as he described it in the records," but limited by possible heart disease, is not deemed inconsistent with Dr. Tuteur's and Dr. Fino's opinions. Dr. Zaldivar's detailed inquiry into the demands of Claimant's last coal mine work during his examination of Claimant in 1991, apparently led him to conclude that these demands were quite limited. Other indications of Claimant's last coal mine work in the numerous medical records Dr. Zaldivar reviewed makes it not entirely clear what coal mine work he was referring to or to what extent his assessment of what constitutes hard manual labor might have coincided with Dr. Fino's. His conclusion, in substance, that the cause of any impairment is not attributable to coal mine dust exposure, is consistent with the conclusions in that regard of Dr. Tuteur and Dr. Fino, and is credited. The three doctors reflect an apparent consensus that Claimant has a mild to moderate obstructive pulmonary impairment which does not disable him from a pulmonary standpoint from his last coal mine employment; which does not qualify as coal workers' pneumoconiosis; and which is not

caused or affected by exposure to coal mine dust. They also convincingly attribute Claimant's mild or moderate obstructive pulmonary impairment to the consequences of a long and substantial smoking history of forty or fifty years. However, precisely what they perceived as the work and exercise requirements of Claimant's last coal mine work was not uniform, but not significantly less reliable than the perceptions of the other opining physicians, Rasmussen and Cohen.

The Weight of Dr. Rasmussen's Opinion

Claimant has relied primarily upon the opinions of Dr. Rasmussen and Dr. Cohen to support his claim that he is totally disabled due to pneumoconiosis. Dr. Rasmussen, who is board-certified in internal medicine, provided an opinion that was based on a pulmonary examination in May 1999. The examination included objective tests that Dr. Rasmussen interpreted as establishing that Claimant had a moderate loss of pulmonary functions and lack of pulmonary capacity to perform his last regular coal mine employment consisting of varied heavy labor. In particular, Dr. Rasmussen based his opinion upon observed evidence of moderately reduced diffusing capacity, minimal resting hypoxia, moderate impairment in oxygen transfer, and minimal hypoxia during exercise, largely derived from the constant workload exercise study and arterial blood gas studies which he conducted. His understanding of the heavy labor used for comparison with Claimant's pulmonary capacity apparently included the full range of Claimant's past coal mine employment, including jack setting, and carrying fifty pound rock bags substantial distances, as well as his last coal mine employment as beltman, which required constant shoveling. Dr. Rasmussen perceived all of this activity as hard labor and opined that Claimant's pulmonary capacity was insufficient to perform it. However, the strenuousness of the work Claimant was last required to perform was substantially overstated.

The results of Dr. Rasmussen's exercise blood gas studies in May 1999 have been effectively challenged as an aberrant reflection of Claimant's pulmonary condition, so that his assessment of the extent of impairment understates Claimant's actual pulmonary capacity to perform his last coal mine employment as beltman. Dr. Rasmussen did not have Dr. Zaldivar's blood gas test results before him. He also apparently had not reviewed Claimant's medical records in formulating his assessment, which is a fundamental weakness in his opinion compared with those based upon such a review, because of the importance of the alleged changes in Claimant's pulmonary capacity, or lack thereof, over time. In particular, Dr. Rasmussen, apparently, was unaware of, or did not consider, the acute exacerbation of Claimant's COPD in March 1999, considered by Dr. Tuteur, which put Claimant in the hospital, and, according to Dr. Tuteur, explains a deterioration in Claimant's pulmonary capacity which was only partially resolved in May 1999, when Dr. Rasmussen tested him. It is obviously significant that Claimant continued to recover so that his blood gases were purportedly normally the time Dr. Zaldivar tested him in September 1999.

Also, Dr. Rasmussen attributed Claimant's pulmonary impairment to an undifferentiated combination of coal mine dust exposure and cigarette smoking. But the attribution is impaired by the fact that Dr. Rasmussen may have relied on an early termination of claimant's smoking habit in 1979, when the record is otherwise clear, and this tribunal finds, that Claimant did not stop smoking until 1989. It appears that Claimant had stopped smoking for an interval around the time of Dr. Zaldivar's

earlier examination. In addition, Dr. Rasmussen's opinion was sparse in its reasoning and did not treat any of the pulmonary or respiratory patterns and relationships which Dr. Tuteur and Dr. Fino addressed in reaching their conclusions that there was no coal workers' pneumoconiosis which caused any disabling impairment which Claimant might have. The persuasiveness of Dr. Rasmussen's opinion is significantly diminished by his failure to account for these factors, and somewhat diminished by his somewhat lesser professional qualifications of record.

The Weight of Dr. Cohen's Opinion

Like Dr. Fino and Dr. Zaldivar, Dr. Cohen is board-certified in internal medicine, and the subspecialty of pulmonary disease, and is a B-reader. Dr. Cohen's reasoned opinion considered specified medical records associated with Claimant's twenty-four year coal mine work history that, with smoking, led, in Dr. Cohen's opinion, to Claimant's moderate obstructive lung disease, diffusion impairment, and abnormal gas exchange noted on exercise arterial blood gas studies. These factors, he concluded, would prevent Claimant from performing his last coal mine employment. Dr. Cohen attributed the impairment to twenty-four years of underground unprotected coal dust exposure and a lengthy cigarette smoking history. Dr. Cohen understood Claimant's last coal mine employment to require him to shovel many times during the day. He described no other work. Dr. Cohen's conclusion was explicitly based upon spirometry testing purportedly showing obstructive lung disease progressing from mild to moderate, and evidence of diffusion impairment, which he opined indicated, contrary to the opinions of Dr. Tuteur and Dr. Fino, an abnormality in gas transfer, and indicia of interstitial lung disease and emphysema. Dr. Cohen noted the progression of normal resting blood gas study results in 1985 to significant abnormalities in gas exchange with exercise and exercise induced hypoxemia in Dr. Rasmussen's May 1999 study. He opined that the study of September 1999, which he erroneously attributed to Dr. Fino rather than Dr. Zaldivar, did not show the abnormalities, which tended to prove disability, disclosed on Dr. Rasmussen's study because, in his opinion, the administering physician had stopped the later study prematurely.

For a variety of reasons the credibility and persuasiveness of Dr. Cohen's opinion is impaired. Unfortunately, Dr. Cohen did not review Dr. Tuteur's August 2000. Certain of his significant broad assertions are not explained or clearly supported by the record, and some are contrary to the assessments of other physicians. Dr. Cohen declared ambiguously, "Mr. Smallwood had diffusion impairment, which was present as early as 1990, the first time it was measured. This indicates an abnormality in gas transfer. This abnormality was present on all five occasions when it was measured. The pattern of diffusion impairment was that consistent with an altered gas exchanging surface. This can be seen in interstitial lung disease and emphysema, both of which can be caused by coal dust exposure." While there is no apparent dispute that Claimant has a moderate diffusion impairment, disclosed as early as 1990, both Dr. Tuteur and Dr. Fino explicitly indicated that the diffusion impairment, indicating the presence of emphysema, is not associated with abnormal blood gas transfer, and Dr. Tuteur identified other factors which could cause the diffusion impairment in the absence of abnormal blood gases. Dr. Zaldivar indicated that blood gases were normal when he tested. Dr. Fino indicted that five blood gas tests disclosed no oxygen transfer impairment or related disability, because Claimant was not hypoxic with exercise, except that Dr. Rasmussen's May 1999 study showed a

unique minimal drop in PO2 from 72 at rest to 67 which Dr. Fino did not consider disabling. Dr. Tuteur explained that Dr. Rasmussen's testing in May 1999 took place so soon after Claimant March hospitalization for an exacerbation of COPD that he had not fully recovered as he would by the time of Dr. Zaldivar's tests in September 1999.

Dr. Cohen did not address the March exacerbation or its possible consequences, and discounted Dr. Zaldivar's test results as having been terminated prematurely, too early to reveal fully Claimant's abnormalities. This tribunal finds, however, that Dr. Cohen has not established that Dr. Zaldivar's exercise test was stopped prematurely, because it appears that, regardless of the error by Dr. Zaldivar, the maximum heart rate achieved was well over 80% of predicted, and in fact was 88% of the predicted. There is credible evidence, which is not contradicted, that such tests are generally terminated when the heart rate achieves at least eighty percent of the predicted maximum, as it did in the case of Dr..Zaldivar's September 1999 test, notwithstanding the doctor's error. Dr. Tuteur concluded that the extent of the exercise was sufficient for a reliable assessment, as did Dr. Fino. Since the conflict in evidence of disability among the opining doctors is focused largely on the extent of impairment, Dr. Cohen's apparently erroneous assessment of the comparative results of Dr. Rasmussen's May 1999 study and Dr. Zaldivar's September 1999 study renders his assessment of Claimant's pulmonary impairment and impaired work capacity unreliable in significant respects, and accordingly it is given less weight.

Much of Dr. Cohen's assessment is based on the premise that smoking and coal mine dust inhalation can and do cause similar obstructive pulmonary abnormalities. He relied, in giving his opinion and challenging Dr. Fino's conclusions, on extensive references to medical literature indicting that a miner's exposure to coal mine dust can and does cause obstructive pulmonary abnormalities similar to Claimant's, and by implication has done so in this case. However, he has not convincingly disproved Dr. Fino's opinion that extensive statistical evidence that exposure to coal mine dust causes obstructive pulmonary abnormalities in miners does not mean that the abnormalities attributed to that cause will be clinically significant or disabling. Nor has Dr. Cohen refuted Dr. Fino's conclusion that the effects of exposure to coal mine dust in miners must therefore be evaluated on a case by case basis.

In addition, both Dr. Tuteur's and Dr. Fino's opinions were more extensively reasoned than Dr. Cohen's, and provided what this tribunal concludes to be more accurate assessments of the underlying objective evidence. Dr. Cohen associated diffusion impairment with abnormality of blood gas transfer, which both Dr. Tuteur and Dr. Fino indicated was not present in this case. As a consequence, Dr. Cohen's failure to explain the basis for his conclusion impairs the credibility of his opinion. Also, Dr. Cohen did not provide a reasoned assessment of the effects of Claimant's long smoking history on his condition. Because this tribunal has concluded that the challenge to Dr. Zaldivar's September 1999 tests have disclosed an error, but that the basic test results are not invalid as Dr. Cohen contends, the opinions of Dr. Tuteur and Dr. Fino that Claimant does not have a persistent impairment of blood gas exchange, which would indicate significant disability, are more persuasive. That being the case, it appears that disabling effects stemming from impairment of oxygen transfer have not been established, and that any pulmonary impairment would stem from the mild to

moderate obstructive abnormality associated with Claimant's reduction in diffusion capacity caused by emphysema, which is not totally disabling, as opined by Dr. Tuteur and Dr. Fino. Dr. Zaldivar also found no evidence of disabling pulmonary impairment, and found mild or moderate obstruction impairment attributable only to smoking.

The doctors also disagree as to the existence of interstitial disease, with Dr. Cohen asserting that it exists based on substantial x-ray evidence and the reduced diffusion capacity. The evaluation of the x-ray evidence led Dr. Tuteur, Dr. Fino, and Dr. Zaldivar to conclude that there is no evidence of coal workers' pneumoconiosis or interstitial pulmonary disease. Though there are a number of positive readings by qualified readers, this tribunal is not persuaded that there is a preponderance of such evidence, and notes that such positive x-ray evidence as has been identified is relatively minimal simple pneumoconiosis. Dr. Tuteur and Dr. Fino are comparably qualified professionally in comparison to Dr. Cohen, and their reasoning is sufficiently detailed and convincing in relation to Dr. Cohen's to persuade this tribunal that the existence of coal workers' pneumoconiosis or interstitial pulmonary disease has not been established. Dr. Tuteur, Dr. Fino, and Dr. Zaldivar concede that the absence of such evidence does not exclude the possibility of coal workers' pneumoconiosis. Likewise, Dr. Tuteur and Dr. Fino attributed the existence of a long term decrease in FEV1 to the aging process with some effects from the lengthy smoking history, but no perceptible effects from coal mine dust exposure. Dr. Cohen's argument that coal dust exposure and cigarette smoking have been shown statistically to cause similar obstructive abnormalities does not convince this tribunal that coal mine dust inhalation has caused a disabling pulmonary impairment in this case, especially in light of the opinions of Dr. Tuteur and Dr. Fino that the adverse effects of coal mine dust inhalation in this respect tend to be minuscule, as do the additive effect. Those propositions have not been convincingly refuted.

Dr. Tuteur opined that there is "partial disability" attributable to a variety of factors including smoking, which has caused a mild to moderate obstructive impairment. Dr. Fino opined that there is a mild obstructive impairment attributable to smoking and the emphysema which has caused the impaired diffusing capacity but not impaired blood gas transfer. Dr. Zaldivar found no substantial impairment attributable to pulmonary causes which would preclude Claimant from doing moderate work in the nature of his last coal mine employment, although he might be limited by cardiac disease. Dr. Rasmussen found total disability and inability to perform work which was described as including strenuous tasks that do not appear to have been included in Claimant's last coal mine employment. Dr. Rasmussen's assessment of total disability also appears to have depended in part upon an assessment of variable resting hypoxia and exercise hypoxia which was aberrational and not Claimant's persistent or normal condition. Dr. Cohen's assessment of moderate obstructive pulmonary impairment is based upon what appears to have been a superficial but relatively accurate assessment of Claimant's last coal mine work, and a flawed assessment of the causes, characteristics, and extent of the obstructive impairment.

It follows that there is not a preponderance of the evidence which establishes a disabling pulmonary impairment, although there is evidence which suggests that Claimant could not perform the manual labor required by his last coal mine work because of cardiac or other causes, but it is not at

all clear that there has been a substantial change in this regard since the last denial of benefits in 1992. What indications there were in Dr. Rasmussen's exercise blood gas tests that there was an impairment of gas exchange that would have been disabling were overcome by the normal results of Dr. Zaldivar's September 1999 test. The contention that Dr. Zaldivar's test was invalid, as were the conclusions derived from the analyses of it, because of Dr. Zaldivar's erroneous notation of the maximum achieved heart rate, and reliance thereon by Dr. Zaldivar and other physicians, has not been established, particularly because the recorded percentage of the maximum heart rate actually achieved to the predicted maximum heart rate was accurate, and the underlying technical report accurately reflected the pertinent actual and predicted maximum heart rates.

Moreover, the reliance of Dr. Rasmussen and Dr. Cohen on Dr. Rasmussen's May 1999 test results, and Dr. Cohen's rejection of the validity of Dr. Zaldivar's normal test results, renders their assessments of Claimant's pulmonary impairment and total disability significantly more narrowly based and less persuasive. Since Dr. Fino and Dr. Zaldivar found no coal workers' pneumoconiosis, only a mild obstructive pulmonary impairment which was insufficient to preclude Claimant from performing his last coal mine work; since Dr. Tuteur found a moderate obstructive impairment effecting partial disability due to multiple causes, and did not relate to any specific work capacity demands; and since the assessments of Dr. Rasmussen and Dr. Cohen regarding Claimant's pulmonary impairment were flawed, with Dr. Rasmussen suggesting that the applicable work requirements were substantially greater than appears to have been the case with Claimant's actual last coal mine work as beltman, there is not a preponderance of evidence that establishes that there has been a material change in conditions since Judge Lawrence found that Claimant was not disabled by coal workers' pneumoconiosis in 1992. Benefits should be denied on that basis.

Examination of the Entire Record on the Merits,
Particularly as Developed Prior to the Pending Claim

If it were assumed, contrary to the finding of this tribunal, that Claimant has proved that he is totally disabled by a respiratory or pulmonary impairment, a review of the entire record on the merits of the claim would be required. Because the issue is not free from doubt, this tribunal has reviewed the entire record and has concluded that Claimant has not proved the existence of coal workers' pneumoconiosis, and has not established that he is totally disabled due to pneumoconiosis. Although Judge Lawrence found the existence of pneumoconiosis in 1992, the evidence in the entire record now before this tribunal leads to a contrary conclusion. Although, as Dr. Cohen suggested, there is significant positive x-ray evidence of record, the clear preponderance of the x-ray evidence is negative, as observed by Dr. Tuteur, Dr. Fino, and Dr. Zaldivar, and this tribunal, so that the existence of pneumoconiosis is not established pursuant to §725.202(a)(1). There is no biopsy evidence under §718.202(a)(2). The presumptions specified under §718.202(a)(3) are inapposite because there is no evidence of complicated pneumoconiosis, the claim was filed after 1982, and the Claimant miner is living. And the preponderance of physicians' reasoned opinions, specifically those of Dr. Tuteur, Dr. Fino, and Dr. Zaldivar, discussed above, as well as those rendered earlier, is that Claimant does not have coal workers' pneumoconiosis or a condition of the lung related to coal mine dust exposure. Dr.

Rasmussen's and Dr. Cohen's views to the contrary are not convincing in the context of this record as a whole and do not comprise a preponderance of the most persuasive evidence under §718.202(a)(4). Obviously, if Claimant does not have coal workers' pneumoconiosis, it cannot have caused any disabling pulmonary impairment.

Claimant relied previously upon Dr. Rasmussen's substantially unchanged opinion that Claimant has a totally disabling pulmonary impairment which prevents him from performing his last coal mine work. Dr. Rasmussen assessed that work as hard manual labor. Dr. Rasmussen based his opinion as to cause of the disabling impairment he assessed largely upon the twenty four years of coal mine dust exposure underground and a substantial smoking history, which he assessed in his May 1999 opinion as ending about ten years earlier in 1979 than was actually the case, but had correctly assessed in his April 23, 1990, opinion as 1989. He opined that the moderate obstructive pulmonary impairment which he identified was necessarily attributable to both of these risk factors. Significantly, he opined "[t]hat his coal mine exposure appears to be the most prominent factor considering the pattern of impairment in gas exchange absent significant ventilatory impairment," notwithstanding his opinion in the same narrative assessment that the exercise studies overall indicated moderate loss of pulmonary function and a lack of pulmonary capacity to perform his last coal mine job requiring heavy manual labor. In addition, his finding of impairment in gas exchange conflicts with the findings of Dr. Tuteur and Dr. Fino to the contrary. Dr. Rasmussen's lesser credentials and problematical reasoning make his opinions less convincing.

Claimant also relied upon the opinion of Dr. Cohen, who opined that the moderate obstructive impairment which he found was similarly attributable to a combination of protracted cigarette smoking and a twenty-four year employment history of underground coal mine dust exposure ending with a beltman's job involving extensive coal shoveling. Dr. Cohen's opinion was premised on extensive literature which establishes a significant causal relationship between obstructive pulmonary disease and impairment and coal mine dust exposure. He opined that the obstructive pulmonary abnormalities caused by coal mine dust exposure and smoking are very similar. What is clear on this record, however, primarily from the reasoned opinions of physicians, is that significant abnormalities, pulmonary disease, and pulmonary impairments are not inevitable as to existence or effect, whether derived from coal mine dust exposure or smoking or both, and each miner's case must be evaluated on an individual basis. This tribunal has found the reasoning and conclusions of Dr. Tuteur, Dr. Fino, and Dr. Zaldivar in this regard, more persuasive because of their scrutiny and assessment of particular and individual aspects of Claimant's pulmonary condition, rather than reliance upon general inferences from statistical studies. As a consequence, this tribunal concludes that Claimant has not established a preponderance of evidence establishing either that coal mine dust was a significant or substantial contributing factor to any pulmonary impairment or that such impairment was not attributable, virtually exclusively, to his smoking history.

Because of the progressive incurable nature of coal workers' pneumoconiosis, significantly older x-rays, in general, are deemed less probative than more recent x-rays. An assessment of the x-ray evidence in the whole record, and specifically prior to the instant claim, gives no cause to change the conclusion that a significant majority of the most qualified interpretations of x-rays are negative,

and that coal workers' pneumoconiosis is not established radiographically. An early x-ray dated April 12, 1974, interpreted by an unknown reader under the auspices of the Public Health Service, indicated early dust retention in the lungs, category 1, simple pneumoconiosis. A nonconforming x-ray of September 25, 1979, read by Dr. Thompson of unknown qualifications was read as normal. A nonconforming x-ray of uncertain date around July 31, 1979, by an unknown reader was positive for simple pneumoconiosis and emphysema. A Veterans Administration application for medical benefits included an indeterminate reference to an x-ray and an unexplained diagnosis of pneumoconiosis.

An x-ray taken in connection with an examination by Dr. J.M. Daniel on March 4, 1985, was read as 0/1 by Dr. Gaziano, a B-reader, !/1 by Dr. C.R. Daniel, whose qualifications are not of record, and 0/0 by Dr. Wiot, board-certified radiologist and B-reader. A nonconfoming x-ray taken July 6, 1981, by Dr. Leef, of unknown qualifications, in connection with an evaluation by the West Virginia Occupational Pneumoconiosis board, found no evidence of pneumoconiosis. Six readings of five x-rays taken from 1971 to 1986 were interpreted by identified B-readers under the auspices of NIOSH as 0/0. An x-ray dated October 14, 1987, which was read as 1/0 by Dr. Bassali, a B-reader, was read as negative by Drs. Wiot, Felson, and Spitz, board-certified radiologists and B-readers. Dr. Dahhan, a B-reader, read the x-ray taken in connection with his May 12, 1988, report as negative. Two nonconforming x-rays taken in connection with a hospital admission on September 17 and 25, 1989, made no reference to pneumoconiosis. An x-ray interpretation of 1/0 by Dr. Speiden, a board-certified radiologist and B-reader, in connection with Dr. Rasmussen's examination and report of April 23, 1990, was read as 0/0 by both Dr. Gaziano, a B reader, and Dr. Cole, board-certified radiologist and B-reader. Dr. Speiden read an x-ray dated February 7, 1990, 1/0.

Dr. Zaldivar, a B-reader, read an x-ray dated June 12, 1991, in connection with an examination report dated July 13, 1991, as negative for pneumoconiosis. Three of the four positive readings, two of which were by Dr. Speiden, were reread as negative by multiple comparably qualified readers. The February 7, 1990, positive reading by Dr. Speiden was not reread. However, there are numerous negative readings of record by qualified doctors that were not reread. The nonconforming x-rays are essentially nonprobative. Consequently, there is not a preponderance of x-ray evidence which establishes the existence of coal workers' pneumoconiosis in this Claimant. Indeed, there is a significant preponderance, to the contrary, including a majority of the most recent x-ray interpretations submitted with the current claim. A lung scan performed circa September 25, 1979, and interpreted by Dr. Thompson as disclosing mild bilateral chronic obstructive pulmonary disease and coal workers' pneumoconiosis is of doubtful probative value.

The several sets of pulmonary function studies and arterial blood gas studies in the record were nonqualifying, and so do not establish disability. There is no evidence of cor pulmonale in the record. Consequently, the physicians' opinions of record, especially those submitted prior to or in connection with the last denial of benefits by Judge Lawrence, in relation to the more recent evidence submitted in connection with the instant claim, are crucial to a determination on the record as a whole as to the existence of coal workers' pneumoconiosis, its causation, the extent of any disability and its cause or causes.

Of primary significance included in the older evidence are examinations and reports by Dr. Daniel dated March 4, 1985; a report dated May 12, 1988 by Dr. Dahhan, who is board-certified in internal medicine and pulmonary medicine and a B-reader, based on a review of specified medical records; a report dated February 21, 1990 based on examination and testing by Dr. Rasmussen, who is board certified in internal medicine; a second examination and report dated April 23, 1990 by Dr. Rasmussen; a report dated July 13, 1991, by Dr. Zaldivar, who is board-certified in internal medicine, and pulmonary disease, and a B-reader, based on an examination on June 12, 1991; and a report dated July 27, 1991, by Dr. Tuteur, who is board-certified in internal medicine and pulmonary disease, based on a review of specified medical records. Dr. Daniel's qualifications are not of record. There is also a July 6, 1981, examination and limited report by Dr. Rectenweld and Dr. Leef, whose qualifications are not of record, on behalf of the West Virginia Occupational Pneumoconiosis Board. They noted without elaboration a normal exercise test and no evidence of pneumoconiosis. The Veterans Administration medical documents generated around July 1979, which are illegible to a great extent, indicate a diagnosis of pneumoconiosis, but no explanation or documentation, and are old enough to have little if any probative value. A discharge report by Dr. Salon dated September 29, 1989, relating to a hospital admission for pneumonitis and other symptoms, assumes the existence of black lung, but refers to two x-rays without reference to pneumoconioses, and is essentially nonprobative with respect to pneumoconiosis.

Dr. Daniel's examination and report dated March 4, 1985, included appropriate medical, forty year smoking history, and employment histories, consideration of x-ray interpretations, an EKG, nonconforming pulmonary function tests disclosing mild obstructive defect, normal arterial blood gas studies. He seemed to indicate that his diagnosis of pneumoconiosis was related to dust exposure in coal mine employment, and the chronic obstructive pulmonary disease was not, because there was x-ray evidence of pneumoconiosis, presumably based on Dr. C.R. Daniel's positive reading of the March 4, 1985, x-ray, which was also read by Dr. Gaziano as 0/1, or negative. He found no evidence of significant pulmonary dysfunction, opining that Claimant should be able to perform the usual activities of coal mining. Its age, the lack of evidence of the doctor's qualifications, and the sketchy reasoning render this opinion of little probative value.

Dr. Dahhan's review of medical records led him to conclude in his report dated May 12, 1988, that there was no pneumoconiosis. He noted normal pulmonary function studies, arterial blood gas studies, clinical tests, and negative x-rays by a majority of readers. He observed that cough and sputum production caused chronic bronchitis accounted for by his smoking history, and that total or partial disability was not evidenced by the tests he reviewed, and that Claimant could do his normal col mine work from a pulmonary perspective. His reasoned opinion is credited, but it is old and had a limited documentary basis.

Dr. Rasmussen administered pulmonary function tests to the Claimant on February 21, 1990, which he interpreted as revealing minimal irreversible obstructive ventilatory impairment, minimally decreased maximum breathing capacity, markedly decreased diffusing capacity, but normal intra pulmonary mixing and normal lung volumes. Subsequently, Dr. Rasmussen's examination and testing, and the resulting report, dated April 23, 1990, reflected cognizance of medical, smoking, and

employment histories, including twenty-four years of coal mine employment, mostly before dust suppressors, with a last job as plow planer operator on the long wall, with frequent shoveling, characterized as considerable heavy manual labor. This was an erroneous finding because Claimant's last coal mine work was as a beltman with apparently different work and exercise requirements, primarily shoveling. Dr. Rasmussen performed additional pulmonary function tests before and after bronchodilators, essentially normal resting arterial blood gas studies, and a minimally decreased single breath carbon monoxide diffusing capacity. He obtained an EKG, and an x-ray interpreted by Dr. Speiden as positive, 1/0. The treadmill exercise study revealed a markedly increased heart rate, somewhat premature anaerobic threshold suggesting decreased cardiac output volume, but only slight impairment in oxygen transfer.

Dr. Rasmussen noted that Claimant was not hypoxic, and that there was minimal impairment in respiratory function because of the minimal irreversible obstructive disease and reduced single breach carbon monoxide diffusing capacity, as well as possibly reduced cardiac function. He diagnosed coal workers' pneumoconiosis based on twenty-four years of coal mine employment and dust exposure and x-ray changes reflected in an x-ray interpretation by Dr. Speiden; chronic bronchitis based on a history of productive cough; possible arteriosclerotic heart disease based on exercise induced chest pain and early anaerobic threshold during exercise. He opined that the respective etiologies were coal mine dust exposure, coal mine dust exposure and cigarette smoking, and nonoccupational. He opined that Claimant had a minimal pulmonary impairment which would prevent very heavy manual labor such as shoveling, and that the exercise study indicated total disability from resuming his former coal mine employment. However, he observed that the decreased exercise capacity might, in part, be secondary to cardiovascular disease. He identified coal workers' pneumoconiosis and cigarette smoking as the two risk factors for pulmonary disease, opining that there is no way to distinguish between their effects. The result is an equivocal opinion which leaves unresolved the cause and extent of impairment due to coal mine dust, and which is not very persuasive.

Dr. Zaldivar's examination of June 12, 1991, reflected in his report dated July 13, 1991, included appropriate histories, an EKG, pulmonary function tests reflecting mild irreversible obstruction and mild diffusion impairment, normal resting and exercise arterial blood gas studies, and an x-ray. The smoking history was assessed as forty years, beginning at age twenty or twenty-one, in an amount of a pack per day when Claimant quit at age sixty two. Claimant's twenty-four years of coal mine employment ended with retirement in 1974 or 1975 when the mine closed. Dr. Zaldivar recorded a particularly detailed assessment of the work Claimant was actually required to do, focusing, however, exclusively on Claimant's fifteen years of work as long wall plow operator, which was most strenuous when Claimant had to shovel at the tail piece in five minute sessions. He was also required to set jacks, but they were hydraulic and required only setting levers. He had to shovel in front of the sixteen jacks for a minute each to allow them to move. Thus Dr. Zaldivar concluded that the hard manual labor involved was minimal. However, he did not specifically evaluate Claimant's last coal mine work as beltman or the amount of shoveling that work actually involved. Dr. Zaldivar's stated impression was of a history of shortness of breach, a normal examination of the lungs, and a history of chest pain, apparently of musculoskeletal origin.

In his report of July 13, 1991, Dr. Zaldivar also reviewed specified medical records, questioning Dr. Richmond's May 25, 1979, diagnosis of coal workers' pneumoconiosis and chronic obstructive pulmonary disease on the basis of a lung scan conducted that date, because he declared that coal workers' pneumoconiosis cannot be diagnosed by lung scans. He noted normal resting and exercise blood gases, mild irreversible airway obstruction, mild diffusion impairment, no x-ray evidence of pneumoconiosis. He opined that there was sufficient smoking to cause emphysema, and related mild shortness of breath, but that the pulmonary abnormality was mild and insufficient to prevent Claimant from engaging in his usual coal mine employment as he described it, i.e. light for the most part and moderate on some occasions, because all the equipment was mechanized and the only strenuous work was shoveling as described. The reasoned opinion by a doctor with appropriate credentials based on appropriate objective evidence has significant probative weight, even if the reasoning is not as explicit as might be desired.

In the hearing before Judge Bedford on June 8, 1988, Claimant testified that his last job at the belt head or power head involved dumping the coal onto the belt and making sure that it went on correctly. The job lasted about five months and involved constant shoveling throughout the shift. He said he watched to see that the coal went on the belt correctly, and when it did not he stopped the belt and cleaned it up. His job immediately prior, also underground, involved setting jacks on the journeyman's plow at the longwall. He testified that the jacks are moved forward by the manipulation of levers as the coal is taken out. At the hearing before Judge Lawrence on August 29, 1991, Claimant testified that his last job was as boom operator, which simply involved pushing buttons. But there was also a lot of shoveling attached to the job. He testified that he also had to work at the plow head, work for which he no longer had the wind.

Dr. Tuteur's report dated July 27, 1991, was based on a review of specified medical records, including a smoking history of a half to a whole pack of cigarettes per day for nearly fifty years, and twenty four years of coal mine employment underground. He observed that Claimant's medical history centered on exercise intolerance. He suspected cardiac symptoms despite a normal resting EKG. A stress test disclosed no significant ventilatory impairment, or significant impairment of gas exchange. Arterial blood gas studies performed at rest and with exercise demonstrated no impairment of gas exchange. He opined that, because the anaerobic threshold was reached at a low level, Claimant's exercise capacity was limited not by pulmonary function but by limitations of heart output, strongly suggesting organic heart disease. He observed that pulmonary findings indicated mild to moderate obstructive ventilatory defect, not associated with any restrictive component, and not associated with impairment of gas exchange, either at rest or during exercise. He concluded that most x-rays were interpreted as free of changes associated with coal workers' pneumoconiosis. He therefore opined that there was no coal workers' pneumoconiosis of any kind. He opined that Claimant had a cigarette induced chronic bronchitis associated with moderate obstructive ventilatory defect. And Claimant had cardiac dysfunction, probably on the basis of ischemic heart disease, but unrelated to coal mine dust inhalation or pneumoconiosis. Dr. Tuteur opined that Claimant was clearly disabled, in part due to respiratory impairment in the form of mild to moderate obstructive ventilatory defect caused by cigarette smoke induced chronic bronchitis. Also contributing was myocardial dysfunction associated with organic heart disease. He opined that neither was related to or affected by inhalation of coal mine

dust or the development of coal workers' pneumoconiosis. He did not relate the finding of disability to any work description, and he did not specify the extent of disability stemming from multiple causes. The reasoned opinion is persuasive, though problematic as to the precise extent and causes of Claimant's disability.

A comparison of these physicians' opinions from a decade earlier than those of the new evidence is most notable for the similarities of the early and late opinions which are by the same doctors. The opinions also tend to confirm the observations of Dr. Tuteur and Dr. Fino that Claimant's pulmonary history has been remarkably constant, except for the inevitable changes caused by age. Claimant has not smoked or been exposed to coal mine dust since the earlier opinions. The impression created is that there has been no material change in conditions. These opinions also tend to confirm that there is not a preponderance of any category of evidence or an agglomerate of the evidence which establishes the existence of pneumoconiosis. Dr. Zaldivar and Dr. Tuteur, who reviewed medical records, concur that the x-ray evidence does not establish the existence of pneumoconiosis. Dr. Rasmussen's opinions are not based on comprehensive review of Claimant's medical records, and his finding of pneumoconiosis based on the single positive x-ray reading of Dr. Speiden, which is contradicted by at least comparably qualified interpreters, and the Claimant's lengthy underground coal mine work history is substantially less convincing than the more broadly based opinions to the contrary. The issue of disability, the extent of pulmonary impairment alone or in combination with other factors, is not significantly altered in light of the earlier evidence. Dr. Zaldivar is categorical in his conclusions in his early and late reports that the actual work is remarkably light and that the impairment is too limited to be disabling as to Claimant's last coal mine work. Dr. Tuteur's failure to relate his finding of pulmonary and cardiac disability to particular work demands severely weakens the probative value of his finding. The limitations of Dr. Tuteur's earlier finding are not cured in the most recent opinion which suffers from the same ambivalence and imprecision in this regard.

Finally, the earlier opinions and evidence of records gives no cause to change the reasoned conclusions expressed in the new evidence by Dr. Tuteur, Dr. Zaldivar, and Dr. Fino, that Claimant's mild to moderate obstructive pulmonary impairment is not totally disabling and is attributable to his long smoking history and not to inhalation of coal mine dust or coal workers' pneumoconiosis. Dr. Rasmussen's opinion that there is a long smoking history and a long history of exposure to coal mine dust in the mines which have similar effects which cannot be distinguished is effectively equivocal, especially in comparison with the reasoned opinions of the other doctors who have categorically attributed the pulmonary impairment to smoking. What this tribunal perceives as the weaknesses of Dr. Cohen's opinion in this regard has already been discussed.

Conclusion

This tribunal concludes therefore that there has been no material change in conditions in that Claimant's medical and pulmonary condition has not materially changed since Judge Lawrence's denial. This tribunal finds further that Claimant has not established the existence of coal workers'

pneumoconiosis on the total record. Had he done so, there would be no reason not to apply the presumption of causation by coal mine employment, but the issue is moot. A preponderance of the evidence does not established that Claimant is totally disabled by a pulmonary impairment any more than he was a decade ago. And a clear preponderance of the evidence establishes that any pulmonary or respiratory disability that he has was not caused to any significant degree by inhalation of coal mine dust or coal workers' pneumoconiosis in any of its forms. Since Claimant has not demonstrated a material change in conditions by a preponderance of the evidence, the claim must be denied on the grounds of the prior denial. §725.309(d). *See Lisa Lee Mines v. Director, OWCP*, [Rutter], 86 F.3d 1358, 20 B.L.R. 2-227 (4th Cir. 1996) (*en banc)*. A review of the merits of the claim nonetheless provides no basis for an award of benefits.

Attorney's Fee

The award of an attorney's fee under the Act will be approved only in cases in which the claimant is found to be entitled to benefits. Because benefits are not awarded in this case, the Act prohibits the charging of any fee to the Claimant for services of an attorney rendered to the Claimant in pursuit of this claim.

ORDER

The claim of Cecil Smallwood for benefits under the Act is denied.

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EDWARD TERHUNE MILLER
Administrative Law Judge

NOTICE OF APPEAL RIGHTS: Pursuant to 20 C.F.R. § 725.481, any party dissatisfied with this Decision and Order may appeal it to the Benefits Review Board within 30 (thirty) days from the date of this Decision by filing a Notice of Appeal with the Benefits Review Board at P.O. Box 37601, Washington, D.C. 20013-7601. A copy of this Notice of Appeal must also be served on Donald S. Shire, Associate Solicitor fro Black Lung Benefits, 200 Constitution Avenue, N.W., Room N-2117, Washington, D.C. 20210.